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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
COLUCCI, MICHAEL C	

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2626	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/523,326	MARKE ET AL.	
	Examiner	Art Unit	
	MICHAEL C. COLUCCI	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *14-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *14-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Appeal Brief filed 02/12/2009, with respect to the rejection(s) of claim(s) 14-25 under 35 USC 103 (a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Thyssen US 6188980 B1 (hereinafter Thyssen). Though the combined teaching of Makinen in view of Chu teach error concealment, Makinen in view of Chu do not consider the comparison of energy levels of a previous frame with a current from, wherein Makinen in view of Chu merely consider a series of frames with feedback. Thus with support stemming from the specification of the present invention (spec. [0012], Examiner has incorporated Thyssen to address the determination of whether concealment was performed in light of the specification (i.e. same frequency and different energy levels).

As previously cited in the last office action, the combined teaching renders a nearly similar concept, **however lacking** the comparison of previous corrected frames for the purposes of energy differentiation (i.e. a method of determining if error concealment was performed).

"Makinen teaches that as the encoded bit stream is received at step 160, the frame is checked to see if it is corrupted at step 162. If the frame is not corrupted, then the parameter history of the speech sequence is updated at step 164, and the speech parameters of the current frame are decoded at step 166. The procedure then goes

back to step 162. If the frame is bad or corrupted, the parameters are retrieved from the parameter history storage at step 170. Whether the corrupted frame is part of the stationary speech sequence or non-stationary speech sequence is determined at step 172. If the speech sequence is stationary, the LTP-lag of the last good frame is used to replace the LTP-lag in the corrupted frame at step 174. If the speech sequence is non-stationary, a new lag value and new gain value are calculated based on the LTP history at step 180, and they are used to replace the corresponding parameters in the corrupted frame at step 182. (Col. 11 lines 30-47 & Fig. 4).

Further, Makinen teaches whether decoding/demodulation has been correctly performed, where error concealment will be performed relative to information (parameters, gain, lag, Etc.). Makinen teaches the use of feedback as a means to check if error concealment was correctly applied following decoding, thus verifying both decoding and error concealment for a data stream. If the data stream feeds the same data portion from the decoder back to the frame corruption check unit, then the error concealment was performed but errors were not concealed appropriately, where a good frame was not used accordingly, demonstrating that error concealment was not performed successfully for that iteration (Fig. 4)."

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 14-16 and 18-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Makinen et al US 6968309 B1 (herein after Makinen) in view of Chu et al US 6721707 B1 (herein after Chu) and further in view of Thyssen US 6188980 B1 (hereinafter Thyssen).

Re claims 14-16 and 25, Makinen teaches a method for evaluating data containing useful information (Col. 13 line 34-46) received via a communication network (Col. 6 line 24-41)

determining if the error concealment was performed (Col. 11 lines 30-47 & Fig. 4) by evaluating and at least partially correcting (Col. 2 line 11-21), via a channel decoder (Makinen Col. 1- line 1-27), the data received

forwarding, via the channel decoder (Fig. 1), to a speech decoder (Col. 12 line 60-67) the data with characteristics of supplementary information (Fig. 4 '162') representing the data

(Supplementary information is construed as additional information gained from the signal such as whether or not errors/corruption are present within a frame of data from the speech)

decoding the data via the speech decoder (Col. 12 line 60-67) and, where necessary, performing error concealment (Col. 2 line 22-40 & fig. 2)

forwarding the data to a text (Col. 8 line 20-30) telephony receiver (Col. 12 line 1-11 & fig. 6 '330') via the speech decoder

generating, via the demodulator (Col. 12 line 1-11 & fig. 6 '330'), reliability information (fig. 4 & Col. 10 line 28-44) relating to the data received

(Reliability information is construed as the likelihood, probability, or even prediction that data will be properly decoded with no corruption/errors. Reliable information from a frame of speech is that long term predictions even when corrupted, have a high probability of being correctly predicted)

via a demodulator (Col. 12 line 1-11 & fig. 6 '330') in the text telephony receiver (Col. 12 line 1-11 & fig. 6 '330').

forwarding the data, via the demodulator (Col. 12 line 1-11 & fig. 6 '330'), with the reliability information (Fig. 4 & Col. 10 line 28-44) to an error correction (Col. 2 line 11-21) modulator (Col. 11 line 48-67)

correcting the data received, via the error correction (Col. 2 line 11-21) modulator (Col. 11 line 48-67), taking into account the reliability information (fig. 4 & Col. 10 line 28-44)

However, Makinen fails to teach evaluating the data received and analyzing the data statistically (Chu Col. 6 lines 54-67),

Chu teaches a signal processed during data communication that includes a statistical analysis unit for generating data and the frequency of errors. Chu also teaches that the statistical analysis includes bit error rate and energy level transmission between states. Chu teaches a link impairment monitor unit 300 observes the audio data signal on the return link of the data communication channel 231 for the presence of

data transmission errors that are indicative of the presence of a link impairment. In particular, assuming that the two signal processors 200 and 205 are in the bypass mode and exchange compressed audio data information, the link impairment monitor unit 300 will observe each frame of compressed audio data information and control information for possible corruption of the data that is protected by parity or by any other suitable error detection scheme. When errors are detected, a statistical analysis is performed and the results of this analysis are stored in a data structure 302.

Further, Chu teaches energy level during negotiation (assuming bypass negotiation takes advantage/uses the energy profile). (19) The control unit 220 also comprises link error response unit 304 that is operative to react to the detection of a transmission error by the link impairment monitor unit 300, in dependence on the history of statistics maintained by the link impairment monitor unit 300 in the data structure 302. The link error response unit 304 also includes a data structure 306 that contains data elements representative of the operating condition(s) to be met to allow the signal processor 200 to switch to the bypass mode. The following is a non-limiting list of possible operating conditions: (20) Maximum number of bit errors during a certain time frame in the handshaking process; (21) A maximal time period allowed for completing a bypass handshaking procedure; (22) The minimal number of error-free control messages that must be exchanged during the handshaking procedure to consider the procedure successful; (23) Requiring a particular signal characteristic (such as energy level in the signal exchanged during the handshaking procedure).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention error concealment involving evaluating and analyzing data statistically. Statistical analysis allows for an increased probability when computing a decision in a data stream, where error concealment may be difficult to detect. by using statistical means to detect error concealment, data can be processed faster and/or carefully by allocating a specific threshold of probability. Having statistically analysis increases the chances of transmission error detection on a frame by frame basis, where a probability can be in the form of energy (i.e. variance, standard deviation, etc).

However, Makinen in view of Chu fails to teach *determining if error concealment was performed*

Thyssen teaches that a previous LSF vector is used to generate the current LSF vector using concealment (Thyssen Abstract), wherein concealment is performed relative to AMR, where AMR is described as a codec with 5 and 20 ms allocation methods on a frame by frame basis (Thyssen Table 1).

Further, Thyssen teaches concealment detection through energy differences in the spectrum of current and previous energies in line spectral frequencies (Thyssen Col. 14 lines 55-60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Makinen in view of Chu to incorporate determining if error concealment was performed as taught by Thyssen to allow for the detection of higher quality frames, wherein a frame was reproduced or erased based on

the adjustment of a spectrum value at a specific frequency for a previous frames as compared to a current concealed frame, where a common prediction on a 5 and 20 ms renders energy difference detection in an AMR environment (Thyssen Col. 14 lines 55-60).

Re claim 18, Makinen teaches a method for evaluating data containing useful information as claimed in claim 14, wherein the data is analyzed in a mobile station (Col. 5 line 51-67).

Re claim 19, Makinen teaches a method for evaluating data containing useful information as claimed in claim 14, wherein the data is transmitted over a cellular (Fig. 6 '330') mobile communication network (Col. 12 line 12-43).

Re claim 20, Makinen teaches a method for evaluating data containing useful information as claimed in claim 14, wherein for statistical (Chu Col. 11 line 24-35) detection of an error concealment (Col. 2 line 22-40 & fig. 2) by the speech decoder (Col. 12 line 60-67), time segments of frames (Col. 1 line 25-37) of the received useful information are analyzed.

Re claim 21, Makinen teaches a method for evaluating data containing useful information as claimed in claim 20, wherein the time segments (Col. 1 line 25-37) are analyzed in a text telephony demodulator (Col. 11 line 48-67).

Re claim 22, Makinen teaches a method for evaluating data containing useful information as claimed in claim 14, wherein the error correction (Col. 2 line 11-21) modulator is located in (fig. 6 '340') the text (Col. 8 line 20-30) telephony receiver (Col. 12 line 1-11 & fig. 6 '330').

Re claim 23, Makinen teaches a method for evaluating data containing useful information as claimed in claim 14, wherein the data is encoded with Adaptive Multi Rate (Col. 2 line 22-40).

Re claim 24, Makinen teaches a method for evaluating data containing useful information as claimed in claim 14, wherein the useful information includes at least one of text, speech (Col. 8 line 20-30), picture and video signals.

4. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Makinen et al US 6968309 B1 (herein after Makinen) in view of Chu et al US 6721707 B1 (herein after Chu) and Thyssen US 6188980 B1 (hereinafter Thyssen) further in view of Johnson US 6366578 B1 (herein after Johnson).

Re claim 17, Makinen in view of Chu and Thyssen fail to teach a method for evaluating data containing useful information as claimed in claim 14, wherein the data is emergency call-related data (Johnson Col. 56 line 1-12).

Johnson teaches a multiple mode voice and data communication system with language capabilities, where backup communications using channels implement a telephone coupled for emergency voice calls or the like.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention data containing emergency call related data. Having an error concealment scheme for emergency related calls allows for an optimized system, that can has the ability to process data faster to reduce a discrepancy during the communication of an emergency or any time essential situation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Colucci whose telephone number is (571)-270-1847. The examiner can normally be reached on 9:30 am - 6:00 pm, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571)-272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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